

Testing respiratory  
protective devices with users

# Test equipment

## MOBILE BREATH RECORDER



### APPLICATIONS & INDUSTRIES

- Life-saving breathing apparatus: SCBA, SCSR
- Tests in the heat / cold / humidity chambers
- Tests in the ergometry rooms, treadmills, obstacle courses, etc.
- RPE certification, research and design

For developers  
and manufacturers  
of respiratory  
protective  
equipment (RPE)



For certification  
bodies and  
testing  
laboratories



For research  
centers and  
universities



For mining  
industry



# DESCRIPTION

MOBILE BREATH RECORDER is a portable device and software that is connected to a real RPE and records the parameters of a person's breathing in it under various loads and climatic conditions.

## PRINCIPLE OF OPERATION

The test operator creates a test program via PC software



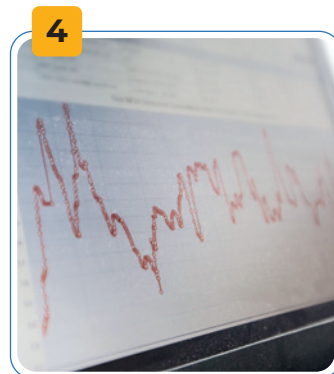
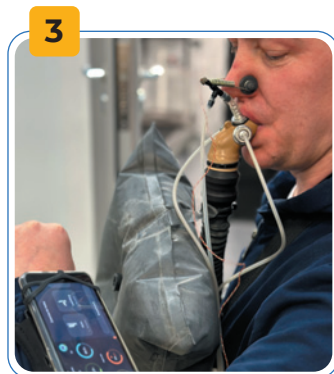
The test program is transmitted via Wi-fi\* to the mobile app on the user's smartphone



The user manages the testing process through a mobile application



The portable measuring unit is connected to RPE, measures and registers breathing parameters



\*The presence of a Wi-fi connection is only necessary at the time of downloading the test program to the smartphone and at the end of the workout to upload the data to the PC. At the time of the test (in the climatic chamber, gym, etc.), the presence of Wi-fi connection is optional.

## CONFIGURATION

### 1. Portable measuring unit

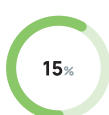


- connected to the RPE tested
- continuously measures the parameters of the gas-breathing mixture (hereinafter GBM) and human breathing in RPE:

Breathing resistance



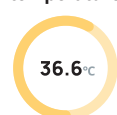
CO<sub>2</sub>



O<sub>2</sub>

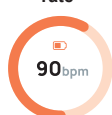


Inhale temperature



### 2. Heart rate monitor

Heart rate



### 3. Mobile application for the user

- hosted on a smartphone
- exercise selection, start and end
- display of the tester's respiratory parameters: breathing resistance, CO<sub>2</sub> and O<sub>2</sub> concentration, exhalation temperature, pulse



### 4. Test operator software

- placed on the personal computer of the test operator
- creation of a test program (set, sequence, duration of physical activity for the user)
- feedback of test results in real-time
- automatic control of test parameters, fixation and formation of a test database with results
- to export test results DATABASE to your devices in PDF&EXCEL-file and print its



Base of ready exercises: walking, running, lifting, climbing stairs, container filling, crawl, shipping, ergometer and other. It's possible to add an extra activity.



# DATA SHEET

SPECIFICATIONS	VALUE*	UNIT
Breathing resistance measurement range	-4 to 4	kPa
Measurement range of carbon dioxide (CO <sub>2</sub> ) in GBM	0 to 5	%, vol.
Measurement range of oxygen (O <sub>2</sub> ) in GBM	0,1 to 100	%, vol.
Inspiratory GBM temperature measurement range	0 to 100	°C
Overall dimensions (LxWxD) of the portable measuring unit	170x105x45	mm
Weight of the portable measuring unit	520	g

TERM OF USE	VALUE	UNIT
Ambient temperature	18 to 25	°C
Air temperature in the climatic chamber	- 40 to 40	°C
Atmospheric pressure	630 to 800	mmHg
Relative humidity	10 to 80	%
WiFi network	2,4	GHz



## SERVICE



**Warranty**  
from 12 months



**Training**  
of the Customer's staff



**Service support**  
for the entire  
period of use

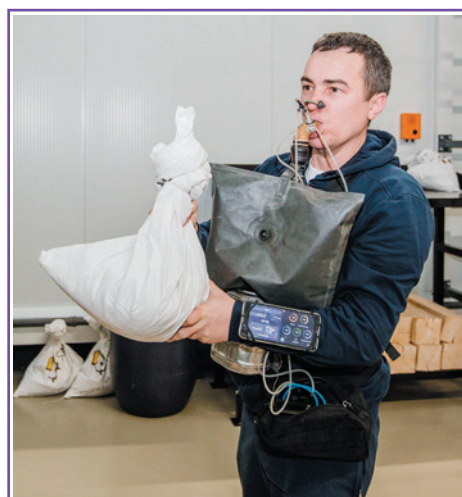


**Development  
of the equipment**  
according to your terms  
of reference

## WHY TEST EQUIPMENT MOBILE BREATH RECORDER?

This is a unique test device that has no analogues in the world in terms of the number of measured parameters and the quality of feedback, ergonomic implementation, convenience and variations in use, providing users with objective data on the properties of RPE with the participation of users.

MOBILE BREATH RECORDER complements the testing program conducted with Metabolic breathing simulator OXY ROBOT.



## WATCH PRESENTATION VIDEO

Click it

